

MAINTENANCE MECHANIC 216

DEPARTMENT: James City Service Authority/Utility Operations

NATURE OF WORK:

Performs difficult and skilled mechanical work in the repair and maintenance of machinery and equipment used in water distribution and wastewater disposal.

Work is performed under the general supervision of the Utility Operations Superintendent.

ESSENTIAL FUNCTIONS OF THE JOB:

Overhauls and rebuilds various types of pumps used in the JCSA's wells and sewage pumping stations. Diagnoses problems in pumps. Dismantles to clean, repair, and replace worn or damaged parts.

Greases and replaces universal joints, shafts, pillow block bearings, valves and other internal parts. Checks and aligns pump motors to pump shafts.

Performs troubleshooting and diagnostic tasks to determine the causes of electrical and mechanical equipment failure and recurring problems.

Provides guidance and assistance to other JCSA employees in identifying and correcting mechanical problems.

Performs preventive maintenance including cleaning, greasing, and lubricating. Cleans and paints pumps and motors.

Performs welding, burning, and fabricates components from various metals required for repairing pumps and structures.

Performs work safely in accordance with departmental safety procedures and the County Safety Program. Operates equipment safely and reports any unsafe work condition or practice to supervisor.

Acts in the absence of the Utility Maintenance Superintendent.

Determines spare parts which should be kept on hand and makes recommendations to the Warehouse Supervisor.

Writes specifications and works with vendors to obtain necessary parts.

May act as lead worker on certain projects.

Performs gas technician calibration and repairs.

Tests and repairs back flow preventer devices.

Designs and installs existing and new hydraulic pump, piping systems

Responds to emergency calls at all hours.

Performs work safely in accordance with departmental safety procedures and the County Safety Program. Operates equipment safely and reports any unsafe work condition or practice to supervisor.

Performs related work as required.

JOB LOCATION AND EQUIPMENT OPERATED:

Duties are performed primarily in the JCSA shop, but also at various well facilities and lift stations throughout the County. Performs manual labor operating a variety of hand and power tools. Requires prolonged periods of standing. Requires climbing up and down ladders into wells and manholes. Drives County vehicles to work sites.

REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES:

Thorough knowledge of the repair and maintenance of electrical and mechanical pumps, generators, engines, and motors.

Ability to read and understand technical manuals, blueprints, and schematics.

Ability to lift and move heavy equipment.

MINIMUM QUALIFICATIONS:

High school diploma or equivalent supplemented by technical courses in electromechanical systems; extensive experience in electromechanical industrial or marine maintenance; or any equivalent combination of acceptable education and experience providing the knowledge, skills, abilities, and cited above.

NECESSARY SPECIAL QUALIFICATIONS:

Possession of a valid Virginia driver's license and have an acceptable driving record based upon James City County's criteria.

Must possess the ability and tolerance to function in an environment that requires the use of respiratory protection devices, i.e., respirators both canister and airline types, and self-contained breathing apparatuses. The incumbent for this position will maintain the ability to fulfill all requirements of the JCSA's Respiratory Protection Program.

IDENTIFICATION OF GENERAL APTITUDES AND PHYSICAL REQUIREMENTS

Position Title Maintenance Mechanic

Position Number 216

Department JCSA

Division Utility Operations

The Americans with Disabilities Act requires that we identify the general aptitudes and physical requirements needed to perform the job listed above. Individuals who have the position must be able to perform all essential job functions unaided or with reasonable accommodation.

I. Mental Abilities: General learning ability. The ability to “catch on” or understand instructions and underlying principles.

- ☒ Ability to understand and follow oral instruction
- ☒ Ability to understand and follow written instruction
- ☒ Ability to guide and/or give instructions
- ☒ Ability to make decisions in accordance with established procedures and policies
- ☐ Not essential to job function

II. Verbal Abilities: Ability to understand meanings of words and ideas associated with them and to use them effectively. To comprehend language, to understand relationships between words, and to understand meanings of whole sentences and paragraphs. To present information or ideas clearly.

1. Speaking/Talking:

- ☒ Answering telephone, radio, or switchboard
- ☒ Communicating with County officials
- ☒ Communicating with general public
- ☒ Communicating with vendors
- ☒ Communicating with supervisors and/or with other employees
- ☒ Communicating with others must have ability to convey technical meanings
- ☐ Not essential to job function

2. Hearing/Listening:

- ☒ For communication with County officials, public, vendors, supervisors and/or other employees
- ☐ Not essential to job function

3. Reading: (ability to read and understand text)

- ☒ Essential to job function
- ☐ Not essential to job function

III. Numerical: Ability to perform arithmetic operations quickly and accurately.

- ☒ Ability to mentally perform accurate two digit calculations
- ☒ Ability to perform accurate calculations aided by a calculator, adding machine or measurement device

IV. Spatial Abilities: Ability to comprehend forms in space and understand relationships of plane and solid objects. May be used in such tasks as blue print reading and in solving geometry problems. Frequently described as the ability to “visualize” objects of two or three dimensions, or to think visually of geometric forms.

- ☒ Essential function
- ☐ Not essential function

V. Motor Coordination: Ability to coordinate eyes and hands or fingers rapidly and accurately in making precise movements with speed. Ability to make a movement response accurately and quickly.

1. Manual Dexterity: Ability to move the hands easily and skillfully. To work with the hands in placing and turning motions.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Use telephone | <input checked="" type="checkbox"/> Manipulate computer keyboard and mouse |
| <input type="checkbox"/> Use switchboard | <input type="checkbox"/> Use postage machine |
| <input checked="" type="checkbox"/> Use radio/console | <input checked="" type="checkbox"/> Use hand tools |
| <input checked="" type="checkbox"/> Use a calculator | <input checked="" type="checkbox"/> Use power tools |
| <input checked="" type="checkbox"/> Use a copy machine | <input checked="" type="checkbox"/> Other: <u>must be able to use delicate measuring equipment</u> |
| <input checked="" type="checkbox"/> Use a fax machine | <input type="checkbox"/> Not essential to job function |

2. Finger Dexterity: Ability to move the fingers and manipulate small objects with the fingers rapidly or accurately. For example: electrical wiring.

- ☒ Essential to job function
- ☐ Not essential to job function

Explain: _____

VI. Physical Demands:

1. **Strength**: The quality, state or property of being strong. The power to withstand strain, force or stress.

Please check (✓) in appropriate boxes below.

Ability to manipulate materials and/or equipment (lbs)							Frequency of Manipulation		
	5-	5-10	10-15	15-25	25-50	50 +	Occasionally	Frequently	Continuously
Lift						✓		✓	
Push/Pull						✓	✓		
Hold/Carry						✓		✓	

Manipulation done from: ☒ ground to waist ☒ waist level ☒ waist to shoulder ☒ above shoulder
(Check all that apply)

Not essential to job function: ☐ Lift ☐ Push/Pull ☐ Hold/Carry (Check all that apply)

2. **Climbing**: To move up or mount by using the hands or feet.

Ladders

- ☐ Step stool
☒ 8' to 10' step ladder
☒ Extension ladder
☐ Other _____
☐ Not essential to job function

Stairways

- ☐ 1 flight
☒ 2 flights
☐ 3 or more flights
☐ Other _____
☐ Not essential to job function

Steps

- ☐ 1-2
☐ 2-3
☐ 3-4
☒ Other as many as 25
☐ Not essential to job function

3. **Ability to Stand, Sit, Walk, and Run**:

Please check (✓) in appropriate boxes below.

Duration (hours/day)							Occasionally	Frequently	Continuously
	0-1	1-3	3-5	5-7	7-9	9 +			
Stand			✓					✓	
Sit		✓					✓		
Walk		✓						✓	
Run							✓		

If walking or running, over what type of terrain? ☐ flat ☐ rough ☒ both

Not essential to job function: ☐ Stand ☐ Sit ☐ Walk ☐ Run (Check all that apply)

4. Stooping, Kneeling, Crouching, and /or Crawling:

To bend forward or down from the middle of the waist or the middle of the back, to bend downwards, to lower oneself and/or to move freely on hands and knees.

Daily Amounts

- ☐ 0-5x ☐ 5-20x ☒ 20-50x ☐ 50+x
☐ Other _____ ☐ Not essential to job function

5. Reaching, Handling, Fingering, and/or Feeling:

To stretch out, extend, or put forth a bodily part. To touch or grasp something, by extending or stretching. To touch, lift, hold or operate with the hands.

Daily Amounts

- ☐ 0-5x ☐ 5-20x ☒ 20-50x ☐ 50+x
☐ Other _____ ☐ Not essential to job function

6. Seeing: To perceive or comprehend by the sense of sight.

Essential to job function: These characteristics are necessary (Check all that apply)

- ☒ Peripheral vision
- ☐ Night vision
- ☒ Focus (distinctness or clarity)
- ☒ Color perception (discriminate between colors)
- ☒ Depth perception (determine distance relationship between objects)

VII. *Driving:* The ability to transfer or convey in a vehicle.

Transmission	Standard	Automatic	Multi-Gears
Car	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Van	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Small Truck	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Medium Truck	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Large Truck	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Truck w/Equipment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Heavy Bus Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not essential to job function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (list) _____			